

WHAT IS CLAIMED IS:

1. An overvoltage protective circuit for a brushless dc motor,
comprising:

an overvoltage protective element connected between a power source
5 and a motor drive circuit, the overvoltage protective element is further
connected between the power source and a ground line, and thus adapted to
discharge overvoltage supplied from the power source;

a first resistor serially connected to the overvoltage protective element
and adapted to provide a first voltage reference;

10 a first transistor having a base, the first transistor is connected between
the power source and a motor drive circuit;

a second transistor connected to the first transistor to constitute a switch
set, the second transistor has a base connected to a first resistor so that the
first voltage reference of the first resistor is able to control for turning on or
15 off the second transistor; and

a second resistor connected between the power source and the first
transistor, and adapted to provide a second voltage reference so that the
second voltage reference of the second resistor is able to control for turning
on or off the first transistor;

20 wherein when the power supply has supplied a normal voltage, the

overvoltage protective element is not conducted to discharge the power source to the ground line, the first voltage reference of the first resistor is able to turn off the second transistor, and the second voltage reference of the second resistor is able to turn on the first transistor that allows the power supply to supply to the motor drive circuit;

wherein the power supply has supplied an overvoltage, the overvoltage protective circuit is conducted to discharge the overvoltage to the ground line, the first voltage reference of the first resistor is able to turn on the second transistor for grounding, and the second voltage reference of the second resistor is able to turn off the first transistor that cuts off the power supply to the motor drive circuit.

2. The overvoltage protective circuit for the brushless dc motor as defined in Claim 1, wherein the overvoltage protective element is a zener diode.

3. The overvoltage protective circuit for the brushless dc motor as defined in Claim 1, wherein the second transistor is selected from a PNP transistor.

4. The overvoltage protective circuit for the brushless dc motor as defined in Claim 1, wherein the second transistor is selected from a NPN transistor.

5. The overvoltage protective circuit for the brushless dc motor as defined in Claim 1, wherein the overvoltage protective element is serially connected to the first resistor at a common point which is connected to the base of the second transistor to which to supply the first voltage reference.

5 6. The overvoltage protective circuit for the brushless dc motor as defined in Claim 1, wherein the first transistor and the second transistor are formed with a common point which is connected to the second resistor so as to supply the second voltage reference to the base of the first transistor.